

Date: Tue, 14 Sep 93 04:30:23 PDT  
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>  
Errors-To: Ham-Ant-Errors@UCSD.Edu  
Reply-To: Ham-Ant@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Ant Digest V93 #46  
To: Ham-Ant

Ham-Ant Digest                      Tue, 14 Sep 93                      Volume 93 : Issue    46

Today's Topics:

                    Antennas, Q and bandwidth  
                    Antenna switches and frequency  
                    dual band ant with gain design wanted  
                                    G5RV  
                    HF Multiband Verticals (3 msgs)  
                                    Thanks!

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>  
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 13 Sep 93 19:04:12 GMT  
From: ogicse!hp-cv!hp-pcd!hpcvsnz!tomb@network.ucsd.edu  
Subject: Antennas, Q and bandwidth  
To: ham-ant@ucsd.edu

J.D. Cronin (jdc3538@ul.tb.isc.rit.edu) wrote:

: Do antennas have a "Q" factor associated with them, like a capacitor,  
: inductor or a tuned circuit? Does this affect the range of frequencies  
: a resonant antenna can be used on? Is it possible to extend the  
: useable frequency range of an antenna by lowering the Q factor  
: (that is, having more resistance in it)?

: And where does increasing frequency range by increasing element  
: diameter fit in to all this?

I just happened across a paragraph in "Reference Data for Engineers":

"The broadest bandwidth dipole is the open sleeve dipole, which consists of a dipole with two tubes parallel to the dipole, one on each side (Fig. 23). King and Wong(1) give performance data for various dimensions. The sleeves need not be tubular, but can be flat strips. ... Bandwidth of an octave for vswr roughly 2 is achievable."

(1) King, H. E., and Wong, J. L., An Experimental Study of a Balun Fed Open-Sleeve Dipole in Front of a Metallic Reflector," IEEE Trans., Vol. AP-20, 1972, pp. 201-204.

The diagram shows a dipole constructed of conductors of some diameter, with another two conductors the same diameter spaced away from the dipole, one on either side, but shorter than the dipole by quite a bit. No further info in this book. Maybe someone out there has ready access to this reference and could summarize... Maybe if the diameters and spacings are reasonable, it could be a way to get dipoles to cover entire bands like 80-75 with low SWR.

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Date: Mon, 13 Sep 1993 15:59:23 GMT  
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!europa.eng.gtefsd.com!  
darwin.sura.net!rsg1.er.usgs.gov!dgg.cr.usgs.gov!bodoh@network.ucsd.edu  
Subject: Antenna switches and frequency  
To: ham-ant@ucsd.edu

As a compromise to my two hobbies of amateur radio and scanning, I just put up a discone antenna which works well for both scanning and 2M. I would like to install a two way antenna switch, but I notice that most of them say they are only good to 500 Mhz. Will this be a major impact to scanning over 500 Mhz? I see some switches are good for higher frequencies but these use all N type connectors. Is the 500 Mhz limitation due to tolerances in the PL-259 (UHF) connector design or in the switch itself?

Thanks and 73's.....

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++++++  
+ Tom Bodoh - Sr. systems software engineer, Hughes STX, N0YGT +  
+ USGS/EROS Data Center, Sioux Falls, SD, USA 57198 (605) 594-6830 +  
+ Internet; bodoh@dgg.cr.usgs.gov (152.61.192.66)  
+  
+ "Welcome back my friends to the show that never ends!" EL&P  
+  
++++++

-----  
Date: 14 Sep 93 11:29:03 +1200  
From: munnari.oz.au!comp.vuw.ac.nz!waikato!waikato.ac.nz!barhodes@network.ucsd.edu  
Subject: dual band ant with gain design wanted  
To: ham-ant@ucsd.edu

I am currently working on a project that requires a dual band antenna for the 70cm and 2m bands. Currently i am running two seperate co-linear ant's. What i am after is a dual band antenna design that has the same gain/or better than the antenna combination that i already have. If anyone has a design, It would be much appreciated.

thankx

Bruce Rhodes  
ZL1UBR

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Date: Tue, 14 Sep 1993 02:42:58 GMT  
From: munnari.oz.au!bruce.cs.monash.edu.au!trlluna!titan!rhea!  
djewell@network.ucsd.edu  
Subject: G5RV  
To: ham-ant@ucsd.edu

Now that everyone has absolutely squashed my childhood belief in the G5RV (down the same trail as the Easter Bunny and the Tooth Fairy) what am I to do now. Having recently (2 years ago) moved to a new QTH in a "Green" area where towers are deaply frowned upon, I was going to ressurect the old faithful G5RV until reading this news group. So now what am I going to do. Any suggestions? I want an antenna(s) that gets me up on as many bands as possible from 80 thru 10 metres, doesn't require a tower (I do have trees) and is better than the G5RV (if that really is possible).

Any suggestions? Here or email djewell@trl.oz.au

73

David... (VK3DAJ)

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Date: 13 Sep 1993 13:52:27 GMT  
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!darwin.sura.net!news-feed-2.peachnet.edu!hobbes.cc.uga.edu!news@network.ucsd.edu  
Subject: HF Multiband Verticals  
To: ham-ant@ucsd.edu

Has anyone had any experience with the lower cost multi-band low cost verticals. I am interested in antennas that cover 10M - 40M. I would like

to hear about your experiences with any of the following antennas and how you wound up mounting them :

Hustler 5-BTV  
Cushcraft - AP8A  
Butternut - HF-6V  
MFJ - 1796

These antennas all sell in the \$150 range. However, I would like to hear other suggestions. The MFJ-1796 looks very attractive, but I have not see much performance info on it.  
Thanks in advance for your help.

73s  
KE4EQQ

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Date: 13 Sep 1993 09:00:39 -0700  
From: news.service.uci.edu!paris.ics.uci.edu!safety.ics.uci.edu!not-for-mail@network.ucsd.edu  
Subject: HF Multiband Verticals  
To: ham-ant@ucsd.edu

I am of the general opinion that they are all basically equivalent, to a point. There is no magic in any of these multiband verticals. If they are all basically the same size (and they are), the only difference is in matching and traps, etc. If any of them were dummy loads, we would know. They all work fine. I believe that there are probably real differences, but very slight, in bandwidth, etc.....but ONLY in precisely controlled conditions. IF you put a good ground system under any one of these, and you carefully match them up according to the instructions, I would bet they would all give equivalent performance. I suppose some might last longer physically, and that might be a consideration if you do not maintain your antennas carefully, though.

I have had the 5BTV and a Mosely trap vertical, and the 14AVQ, and several wire verticals and pipes of my own making. Verticals are wild beasts. They can be really great, they can be really poor. The GROUND system is critical. Really. Really. If you can lay down a bunch of radials, you will see some reasonable performance. SOMETIMES the vertical can hear better/transmit better (relatively) than a dipole. These situations are rare, however, in my 25 years experience. The vertical is "noisy", it hears atmospheric noises a lot louder than my dipoles and horizontal antennas. This is an important difference.

My advice it to go with the one you like (for me, I would go for the lower price), and then concentrate my attention on the ground system, that it what will make or break your vertical installation - NOT the brand you choose.

73

Clark

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WA3JPG, QRP #3526, active on HF, VHF and UHF.  
ARRL Volunteer Counsel

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Date: Mon, 13 Sep 1993 16:03:16 GMT  
From: lll-winken.llnl.gov!taurus.cs.nps.navy.mil!rovero@ames.arpa  
Subject: HF Multiband Verticals  
To: ham-ant@ucsd.edu

I'll put in a good word for the Butternut HF6-V. Works well on all bands 80-10M, and especially well on 40 where it is a natural quarter wave vertical.

When installed as directed it is very rugged (it sways in high winds, but doesn't break) and a reasonable match on most bands. The initial tuning requires numerous iterations of [take down, partial disassemble, partial assemble, put up], but after that it is very trouble free.

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Josh Rovero (rovero@oc.nps.navy.mil) | Packet: KK1D @ K6LY  
Department of Oceanography, Code OC/Rv |  
Naval Postgraduate School |  
Monterey, CA 93943 (408) 656-2084 |

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Date: Mon, 13 Sep 1993 20:24:22 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!doc.ic.ac.uk!warwick!uknet!  
zaphod.axion.bt.co.uk!bnr.co.uk!bnrgate!nmerh207!corpgate!nrtpa038!bnr.ca!  
dstone@network.ucsd.edu  
Subject: Thanks!

To: ham-ant@ucsd.edu

Thanks for all the responses on the aluminum tower and control box. The manufacturer of the tower is Heights and I have received a Ham-M control box.

\*\*\* 73! \*\*\*

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Date: 14 Sep 93 04:09:20 GMT  
From: news.service.uci.edu!ucivax!gateway@network.ucsd.edu  
To: ham-ant@ucsd.edu

References <m8pq14INN2l1@news.bbn.com>, <CD1ts0.Mzx@srigenprp.sr.hp.com>,  
<1993Sep14.024258.18728@trl.oz.au>  
Subject : Re: G5RV

In rec.radio.amateur.antenna you write:

.....  
>"Green" area where towers are deeply frowned upon, I was going to  
>ressurrect the old faithful G5RV until reading this news group. So now  
>what am I going to do. Any suggestions? I want an antenna(s) that gets me  
>up on as many bands as possible from 80 thru 10 metres, doesn't require a  
>tower (I do have trees) and is better than the G5RV (if that really is  
>possible).

Hi David:

I know, I know. I still have a G5RV type antenna, but it does not do as well as my 150 foot dipole fed with 300 ohm TV twin lead to a tuner. The G5RV is NOT BAD....it just has some extra losses because of the coax. It won't do quite as well as a dipole for the frequency you are on. IF you use shorter lengths of coax, the loss is less, and you get more signal to (from) the antenna. IF you run the open wire line (or the twin lead) directly into the shack, you will get even more signal to the antenna. The latter is the preferred method, if you have a tuner that can handle it (or a 4:1 balun into a standard coaxial antenna tuner).

My best notion (and it has always worked for me) is to put up the largest, highest dipole you can, no regard to length (well, I suppose non-resonant is best ...try to keep it just over 135 feet, or just over 70 feet - not a real big deal), don't even worry if you feed it exactly in the center. Just run the twin lead (or open wire line) into the shack to a tuner. That's it, should do pretty well. Always has for me.

73.

Clark

.....

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WA3JPG, QRP #3526, active on HF, VHF and UHF.  
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End of Ham-Ant Digest V93 #46  
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